

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of generating a data dump in a data processing system, the method comprising the computer implemented steps of:
initializing a system boot of the data processing system;
executing a firmware that includes first failure data capture logic; and
conditionally creating a data dump in a persistent storage of the data processing system by the firmware based upon a type of reset that caused the system boot, wherein the data dump is created if the type of reset is at least one of a unit check reset, kernel panic reset and host-initiated reset; and
attempting the complete the system boot of the data processing system.
2. (Original) The method of claim 1, further comprising: restarting an operating system kernel responsive to creating the data dump.
3. (Currently amended) ~~The method of claim 1, further comprising:~~ A method of generating a data dump in a data processing system, the method comprising the computer implemented steps of:
detecting a fault condition of the data processing system; [[and]]
determining [[that]] if the data processing system is [[not]] in a recoverable state;
executing a firmware that includes first failure data capture logic; and
creating a data dump in a persistent storage of the data processing system by the firmware if it was determined that the data processing system is not in a recoverable state, otherwise continue execution of the firmware to initialize hardware of the data processing system without creating the data dump.
4. (Original) The method of claim 1, wherein executing a firmware further includes executing first failure data collection logic responsive to initializing the system boot.
5. (Original) The method of claim 1, wherein creating a data dump is performed responsive to determining that a valid data dump does not exist in the persistent storage.
6. (Cancelled)

7. (Currently Amended) ~~The method of claim 1, wherein creating a data dump further comprises:~~
A method of generating a data dump in a data processing system, the method comprising the computer implemented steps of:

initializing a system boot of the data processing system;

executing a firmware that includes first failure data capture logic;

creating a data dump in a persistent storage of the data processing system;

evaluating a fault type of the data processing system; and

writing a plurality of data items to the data dump, wherein the [[order]] writing of the data items is dynamically reprioritized dependent on the fault type.

8. (Currently Amended) A computer program product encoded in a computer readable medium and operable for generating a data dump in a data processing system when executed by the data processing system, the computer program product comprising:

first instructions for evaluating a reset type of the data processing system;

second instructions for determining whether a valid data dump is maintained by the data processing system; and

third instructions, responsive to determining that a valid data dump is not maintained by the data processing system, for executing first failure data capture logic during a boot of the data processing system, including sub-instructions that obtain a priority item from a plurality of priority items to write to a data dump in the persistent storage.

9. (Original) The computer program product of claim 8, wherein the third instructions evaluate a capacity of a persistent storage.

10. (Currently Amended) The computer program product of claim 9, wherein the ~~third instructions, sub-instructions that obtain a priority item from a plurality of priority items to write to a data dump in the persistent storage~~ are responsive to determining that additional capacity remains in the persistent storage; ~~that obtain a priority item from a plurality of priority items to write to a data dump in the persistent storage.~~

11. (Original) The computer program product of claim 10, wherein the plurality of priority items are sequenced according to a reset type.

12. (Currently Amended) ~~The computer program product of claim 8, further comprising: A~~ computer program product encoded in a computer readable medium and operable for generating a data dump in a data processing system when executed by the data processing system, the computer program product comprising:

first instructions for evaluating a reset type of the data processing system;

second instructions for determining whether a valid data dump is maintained by the data processing system;

third instructions, responsive to determining that a valid data dump is not maintained by the data processing system, for executing first failure data capture logic during a boot of the data processing system;

fourth instructions for evaluating a plurality of priority items in a priority list; and

fifth instruction, responsive to the fourth instructions evaluating each of the plurality of priority items as having been written to a data dump, that finalize the data dump for storage.

13. (Original) The computer program product of claim 12, wherein the fifth instructions, responsive to the data dump being finalized for storage, that terminate execution of the first failure data capture logic.

14. (Original) The computer program product of claim 13, further comprising:

sixth instructions, responsive to the first failure data capture logic being terminated, that attempt to restart a system kernel of the data processing system.

15. (Currently Amended) A data processing system for generating a data dump in response to detection of a fault condition, comprising:

a storage device that contains a logic as a set of instructions for generating a data dump and a second set of instructions for performing an initial program load used to initialize hardware of the data processing system; and

a processing unit, responsive to execution of the set of instructions, for evaluating a reset type of the data processing system and, responsive to evaluating the reset type, generating a dump during a boot of the data processing system and writing the dump to the storage device.

16. (Original) The data processing system of claim 15, wherein the storage device is a flash memory, and the dump is written to the flash memory.

17. (Original) The data processing system of claim 16, wherein the storage device is disposed on a subsystem module that is removable from the data processing system.
18. (Original) The data processing system of claim 15, wherein execution of the set of instructions is performed responsive to identifying a system fault as one of a plurality of boot dump collection reset types.
19. (Original) The data processing system of claim 15, wherein execution of the set of instructions is performed responsive to determining that a fault condition detected in the data processing system is not recoverable.
20. (Currently Amended) A computer program product encoded in a computer readable medium and operable for generating a data dump in a data processing system when executed by the data processing system, the computer program product comprising:
- first instructions for collecting first failure data capture information in a storage device when the data processing system experiences a recoverable error;
 - second instructions for collecting first failure data capture information in the storage device when a service processor remains in a serviceable state after the data processing system experiences an unrecoverable error; and
 - third instructions implemented as firmware for collecting first failure data capture information in the storage device during boot of a service processor when the data processing system experiences an unrecoverable error.
21. (Original) The computer program product of claim 20, further comprising:
- fourth instructions that evaluate a system error as one of a plurality of reset types.
22. (Original) The computer program product of claim 21, wherein the plurality of reset types include a unit check reset, a kernel panic reset, and a host initiated reset.